

REMARKS

Reconsideration and allowance of the subject application are respectfully requested.

Claims 1-14 have been examined. Claims 1-16 are all the claims pending in the application.

Allowed claims

Applicant thanks the Examiner for allowing claim 12.

Objections to the Specification

The Examiner has objected to the title of the invention as being non-descriptive.

Applicant herein has amended the title to read “Exposure Apparatus and Method for Exposing a Photosensitive Material with a Plurality of Exposure Heads”, and respectfully requests the Examiner to remove the objection.

Claim objections

Claims 1-13 stand objected to for informalities. Applicant has amended the claims as suggested by the Examiner, and respectfully requests the Examiner to remove the objections.

Claim rejections -- 35 U.S.C. § 112

Claim 14 stands rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite. Applicant has amended claim 14, and respectfully requests the Examiner to withdraw the rejection.

Claim rejections -- 35 U.S.C. § 102

Claims 1-2, 6-7, and 13-14 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. patent No. 5,825,400 to Florence. Applicant respectfully traverses this rejection.

For example, claim 1 recites the feature whereby the first and second exposure heads are driven such that a difference in the maximum exposure amount between pixels adjoining each other in the overlapped exposure area in the main scanning direction is smaller than a difference in the maximum exposure amount between each pixel in the exposure area of the first exposure head and each pixel in the exposure area of the second exposure head. The Examiner maintains that this feature is disclosed by Florence at the table at the top of col. 11, and col. 11, lines 56-59. However, Applicant respectfully disagrees with the Examiner's position.

First, Applicant notes that at col. 10, lines 56-59, Florence discloses only that the intensity of the light from each of the overlapped elements is reduced in order to receive an appropriate exposure from the two heads. Florence then provides the table on the top of col. 11 as an example, wherein a four bit intensity word (i.e., 15 levels of intensity) is used to represent the desired intensity of each pixel. Since the table at col. 11 of Florence is a bit unclear, Applicant has reproduced the table below:

Pixel	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Array 1702	15	15	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1			
Array 1704				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	15	15
Total Intens.	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15

In the table above, Applicant has bolded the overlapping pixels. It is clear from the table above that the maximum exposure amount in the overlapping region (i.e., bolded region of the table) is the same and is 15. That is, for example, pixel 1 has array 1702 amount of 15 and array 1704 amount of 0 = a maximum exposure amount of 15. Pixel 6 has array 1702 amount of 12

and array 1704 amount of 3 = a maximum exposure amount of 15. Accordingly, the difference between the maximum exposure amount between adjoining pixels in the overlapped region would be 0 and the difference in maximum exposure amount between each pixel in the first exposure head and each pixel in the second exposure head is also 0. Thus, Florence does not disclose the feature whereby the first and second exposure heads are driven such that a difference in the maximum exposure amount between pixels adjoining each other in the overlapped exposure area in the main scanning direction is smaller than a difference in the maximum exposure amount between each pixel in the exposure area of the first exposure head and each pixel in the exposure area of the second exposure head, as recited by claim 1. Accordingly, Applicant respectfully submits that claim 1 is patentable over Florence for this reason.

Independent claims 6 and 14 each recite features similar to claim 1, and therefore Applicant respectfully submits that claims 6 and 14 are patentable over Florence for the same reason. Applicant respectfully submits that claims 2 and 7 are patentable based on their respective dependencies.

With respect to claim 13, claim 13 recites the feature that the light emitting intensity of the light emitting sections which are used for exposure in each of the first and second heads gradually decreases towards the downstream side in the main scanning direction and towards the downstream side of the sub-scanning direction. The Examiner maintains that the table at the top of col. 11 and col. 11, lines 56-59 discloses this feature. However, Applicant respectfully disagrees with the Examiner's position.

The table at col. 11 relates to the linear array of light emitting elements shown in Fig. 17. Accordingly, while the table may show that the intensity of the elements gradually decreases in

the main scanning direction, it does not disclose that the intensity of the elements gradually decreases in the sub-scanning direction, as recited by claim 13. Accordingly, Applicant respectfully submits that claim 13 is patentable over Florence for this reason.

Claim rejections -- 35 U.S.C. § 103

Claims 3 and 8 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Florence in view of U.S. Patent No. 5,656,526 to Inada. Applicant respectfully notes that this rejection is over Florence in view of Inada, but the Examiner cites to Stevenson in the explanation of the rejection for claims 3 and 8. Accordingly, Applicant respectfully requests clarification.

To the extent that Applicant understands the rejection, Applicant submits that Claims 3 and 8 depend from claims 1 and 6, respectively, which have been shown to be patentable over Florence. Inada does not cure the deficiencies of Florence. Accordingly, Applicant respectfully submits that claims 3 and 8 are patentable over the Florence and Inada combination for this reason.

Claims 4-5 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Florence in view of U.S. Patent No. 5,450,099 to Stephenson.

Claim 4 recites a feature similar to claim 1, which has been shown above to be patentable over Florence. Stevenson does not cure this deficiency of Florence. Accordingly, Applicant respectfully submits that claim 4 is patentable over the Florence and Stevenson combination for the reasons discussed above with respect to the patentability of claim 1. Applicant respectfully submits that claim 5 is patentable based on its dependency.

Claims 9-11 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Florence in view of U.S. Patent No. 6,184,971 to Narita.

Claims 9-11, each depend from one of independency claims 1, 4, or 6, which have been shown above to be patentable over Florence. Narita does not cure the deficiencies of Florence. Accordingly, Applicant respectfully submits that claims 9-11 are patentable over the Florence and Narita combination for the reasons discussed above with respect to the patentability of claim 1.

New claims

Applicant herein adds new claims 15-16 to claim additional features of the invention, and submits that claims 15-16 are patentable based on their respective dependencies.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Kevin C. Kunzendorf
Registration No. 58,308

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

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